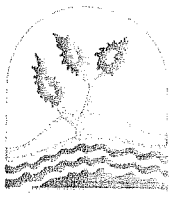

JOSHUA BASIN WATER DISTRICT

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WASTEWATER FEASIBILITY STUDY

MAY 31, 2006

Prepared by:

DUDEK & ASSOCIATES, INC.

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EXECUTIVE SUMMARY

The purpose of this wastewater feasibility study is to identify and describe the facilities that would be required for a centralized sewer collection system and wastewater treatment plant, to replace the septic systems currently in use. The new facilities would be owned and operated by Joshua Basin Water District (JBWD). The new centralized sewer system, if implemented, would include the area of the District in the commercial and residential zone adjacent to Twentynine Palms Highway. More remote areas of the District further from the highway would not be included, due to constraints of distance and topography.

The study has outlined the areal extent and boundaries of the proposed sewered area, the location of a centralized wastewater treatment facility, and the proposed routing of gravity sewer mains within the sewered area. Annual average sewer flows have been estimated, based on the current water consumption within the proposed sewered area and the growth rate projections that the District has recommended. This report includes a planning cost estimate for implementing the facilities and an estimate of the annual cost for operation and maintenance.

The study also addresses various system alternatives and potential funding sources.

TOPOGRAPHY

Figure 1 shows the portion of the Joshua Basin Water District that is located in the immediate vicinity of Twentynine Palms Highway. The figure shows the existing topography at 100-foot contour intervals.

The area to the south of the main highway slopes generally downward towards the highway, with the exception of the area south of Alta Loma Drive. This area is bounded on the north by the hills that run east to west along Alta Loma Drive.

The topography of the area to the north of the main highway slopes downward in an easterly or a northeasterly direction. The profile of the main highway indicates a general slope downhill from the west end to the east end of the District.

SEWERED AREA

Selection of the area to be included in a gravity sewer system is governed by topography. The planning approach for identifying the extents of the sewered area is to include as many of the commercial, industrial, institutional, and higher-density residential parcels as possible in a single area that can drain by gravity in a single direction. Gravity sewer flow from these parcels can be achieved if the centralized wastewater treatment facility is sited at the lowest point in the sewered area. In JBWD, the general ground slope is downward in a northeasterly direction. Some land slopes more to the north, and other land slopes more to the east.

The proposed sewered area is shown in Figure 1. The sewered area consists of parcels that are designated either single-family, multi-family, rural, institutional, industrial, or commercial. The proposed location of the wastewater treatment plant is shown in Figure 1. The plant location was selected because of its low elevation and reasonable buffer distance from the main highway. The location was established at a sufficient distance from the proposed raw water recharge basins, the location of which is also shown in Figure 1. The purpose of the proposed recharge basins will be to augment storage in the regional groundwater aquifer, which is used to supply drinking water to the entire District.

Secondary effluent from the wastewater treatment facility is proposed to be percolated for disposal. The effluent will comply with the water quality standards established by the State Regional Water Quality Control Board. Nonetheless, the effluent will contain trace amounts of nitrate. The required minimum distance between the raw water recharge basins and wastewater treatment plant will be maintained.

Flows from the sewered will be directed in gravity mains running either north or south toward a trunk main along Twenty-nine Palms Highway. This trunk main will parallel the main highway and convey the wastewater to the wastewater treatment plant. Preliminary sizing calculations indicate that the trunk main would need to be 24 inches in diameter. The road profile indicates that a few portions of the trunk main would need to have depths in excess of 20 feet to maintain gravity flow conditions. To limit the depth of cover and save on construction cost, it is possible therefore that the trunk main would divert from the main highway somewhere east of the downtown area, with an alignment further to the north. Because of undulating terrain, some degree of intermediate pumping along the trunk sewer may be required, but the extent of

this intermediate pumping can be minimized by selecting a sewer alignment that utilizes the topography in the most efficient way. Sewer siphons and/or a deep sewer on the trunk alignment may also be implemented in lieu of intermediate pumping, to minimize capital cost.

Figure 1 also identifies an area of residential parcels located south of Alta Loma Drive, in the vicinity of Rocking Chair Road. This area, which contains approximately 300 existing residential parcels, is separated from the main highway by topography along Alta Loma Drive. Because of the topography, it would not be feasible to provide a gravity connection to the trunk main running along the main highway. A pump station and sewer forcemain would be required. The pump station would be located as shown on Figure 1. This pump station would most likely be a packaged dry pit lift station. A sewer forcemain would convey the wastewater to the north, to a manhole along a gravity sewer main.

WASTEWATER TREATMENT PLANT

The wastewater treatment plant would be a secondary treatment facility with effluent levels regulated by the Regional Water Quality Control Board. Because the facility would not have a surface water discharge, the District would not be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from the EPA. Only a state-issued permit from the Regional Board would be required.

Preliminary discussions with the permitting staff at the Palm Desert Office of the Regional Water Quality Control Board (RWQCB) have indicated that a secondary facility with percolation beds for effluent disposal would be acceptable to the RWQCB. While there are several activated sludge technologies for secondary treatment that vary appreciably in capital cost, the JBWD treatment facility would most likely make use of one of the more affordable technologies. Several wastewater agencies in the desert region of Southern California have chosen to construct treatment plants that use oxidation ditch technology. Oxidation ditches have proven to be a relatively simple, affordable, and reliable means of effectively treating municipal sewage to secondary levels. They are known for being capable of obtaining single-digit effluent concentrations for the principal regulated parameters in wastewater treatment: Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS).

The RWQCB in Palm Desert is still in the process of establishing the regulations that would govern the nutrient effluent limits in the discharge. RWQCB staff is currently considering

an effluent limit for total nitrogen of between 10 and 15 milligrams per liter (mg/L), but this requirement has not been finalized or promulgated. Final levels would be established at the time of permit issuance.

The majority of the total nitrogen in the plant effluent will consist of nitrates. Because the effluent will percolate into the groundwater, the selected treatment process would be designed with a nitrification-denitrifcation process capability, which would allow the influent ammonia to be converted to nitrates, with a subsequent reduction in nitrates, through conversion of nitrates to nitrogen gas. Although the RWQCB may require effluent levels of total nitrogen between 10 and 15 mg/L, the actual level of nitrogen can be even further reduced below the required level through appropriate design of the dentrification portion of the treatment system. For the purposes of groundwater source protection, the District may choose to establish a treatment target for total nitrogen that is significantly lower than the permitted level of 10 to 15 mg/L.

Denitrification provides the added benefit of reducing the oxygen demand in the treatment system, thereby reducing electrical costs. The largest electrical cost in the operation of a wastewater treatment facility is the cost of aeration. By reducing the oxygen demand in the activated sludge system, significant savings can be realized.

The RWQCB has indicated that the TDS effluent limit would likely be around 400 mg/L. The brine discharge from the Hi-Desert Medical Center has a TDS of approximately 800 mg/L, but the RWQCB reports that the brine discharge would be allowed in the sewer, if the District was able to show that it did not cause the plant to violate the TDS effluent level at the treatment plant. The brine discharge from the hospital is a very small flowrate, representing the equivalent sewer discharge of between 10 and 15 homes. The brine discharge will have very little effect on the TDS level entering the headworks of the treatment plant.

The process flow diagram for the activated sludge, oxidation ditch system is shown in Figure 2. Figure 3 shows the basic mechanical layout of a twin oxidation-ditch facility sized for a 3.0 MGD treatment capacity.

WATER CONSUMPTION AND ESTIMATED SEWER FLOWS

Water billing data was provided by the District for the entire sewered area shown in Figure 1. The billing records were used to calculate the amount of annual water consumption for

the metered parcels within the proposed sewered area. The current annual average water consumption for this area was found to be 1.31 MGD. This number includes all land use types, with the exception of schools, hospitals, and large apartment buildings. For the approximately 3,400 connections within the proposed area, the current water consumption per connection was calculated at 382 gallons/day.

The following top ten users were considered separately in the analysis:

- Hi-Desert Medical Center (hospital)
- Cemetery
- Quail Springs Apartments
- Yucca Trail Apartments
- Copper Mountain College
- Hi-Desert Continuing Care
- San Bernardino County Office
- Lazy H. Mobile Park
- JT Park & Recreation
- Elementary Schools

The total annual average water consumption for these ten water users was estimated at 0.13 MGD. This number is based on District-furnished consumption records.

PROJECTED GROWTH RATES

Based on communications with the District, it was determined that a front-loaded growth rate would be used to estimate the increase in sewer flows between now and 2025. The front-loaded growth rate assumes that growth between 2006 and 2019 will occur faster than the 3.6% originally projected in official planning estimates. The growth assumptions are 5% per year from 2006 to 2008, 500 additional single family housing units per year from 2009 to 2019, and then 2% in-fill growth for another 60 years. Based on this estimated growth scenario, there would be 7,248 connections at the end of 2015 and 10,415 connections at the end of 2025 within the sewered area.

ESTIMATED SEWER FLOWS AND TREATMENT PLANT SIZING

The estimated average annual sewer flows for the entire sewered area were calculated for 2015 and 2025. The annual growth in water consumption was predicted based on the aforementioned growth rates. Because of the nominal irrigation demands within the District service area, approximately 80% of the metered potable water was assumed to be returned to the sewer.

Table 1 shows the estimated number of potable water connections, annual average water demand, and predicted annual average sewer flows potentially tributary to the wastewater treatment plant.

Table 1 Projected Annual Average Water Demand and Sewer Flows

	2015	2025
Number of Connections	7,248	10,415
Water Consumption (MGD)	3.01	4.21
Sewage Produced (MGD)	2.41	3.37

Based on the projected sewage returns, the required size of the treatment plant is 2.5 MGD for the end of 2015 and 3.5 MGD for the end of 2025. If planning for the treatment plant began relatively soon, the initial facility would probably be sized for a Phase I capacity of 2.5 MGD, which would be adequate capacity through 2015. The facility and the site would be planned so that a Phase II expansion to 3.5 MGD would be completed by 2015.

The installation of sewer main lines and connection of the existing District customers to the new mains would be a gradual process. The trunk main along Twentynine Palms Highway would be constructed first, with new portions of the sewer mains being phased in between 2008 and 2015. Completion of the backbone sewer collection system could be completed at the same time the Phase II treatment plant expansion would be completed, in approximately 2015.

The construction cost of the secondary treatment plant is estimated at $10 per gallon of capacity. Construction bid data shows that oxidation ditch treatment plants in desert communities of Southern California cost roughly $7 per gallon of capacity, in Year 2004 dollars. As such, $10 per gallon of capacity can be used as a planning number for an oxidation ditch plant, assuming that Phase I construction commences in 2008. At $10 per gallon of capacity, a 2.5

MGD treatment plant would cost approximately $25,000,000 to construct. This estimate is based on future (2008) dollars. With additional soft costs for environmental permitting, engineering design, and construction management, the total project cost for the Phase I wastewater treatment plant can be estimated at approximately $28,000,000.

Construction of the Phase II expansion would need to commence in approximately 2013, assuming the projected growth of the area was accurate. Assuming that inflation resulted in an increase in cost of treatment to $12 per gallon in future (2013) dollars, the Phase II expansion from 2.5 MGD to 3.5 MGD would have a construction cost of approximately $12,000,000, with a project cost including soft costs of approximately $13,000,000.

COST OF SEWER SYSTEM

Aside from the cost of the treatment plant, the other major project cost is for planning, design, and construction of the sewer collection system. In preparing an estimate of the cost for the sewer collection system, we calculated the total length of sewer main pipe required, the number of manholes, and the size of lift station required for the sewered area south of Alta Loma Drive. The total length of 24" PVC SDR 35 pipe to be used for the trunk sewer is approximately 53,000 feet. The total estimated length of 8" PVC SDR 35 pipe is 250,000 feet. Assuming a manhole every 300 feet, the number of manholes (6' diameter X 10' average depth) to be used is approximately 1,000. The costs of all these items are summarized in Table 2 below.

Table 2 Material Quantities and Material Costs for Sewer Collection System Components

	Quantity	Estimated Installed Construction Cost per Lin. Feet/each	*Total Cost (Million)*
24" PVC SDR 35 PIPE	53,000 ft	$100/ft	*$5.3*
8" PVC SDR 35 PIPE	250,000 ft	$25/ft	*$6.3*
6' X 10' Manholes	1,000 manholes	$2,500/each	*$2.6*
		TOTAL	***$14.2***

The material cost for these sewer system components is approximately $14,200,000 in 2006 dollars.

An additional cost component for the sewer collection system is a new lift station to serve the area south of Alta Loma Drive. The sewer lift station would be designed to serve approximately 300 connections, which would require a nominal pump station capacity of 0.20

MGD. Based on a concrete cost of $ 750 per CY and excavation cost $ 20 per CY, the total cost of the wet well pit would be $80,000. The packaged lift station itself would cost approximately $400,000 to construct. The estimated construction cost for the entire sewer lift station is $540,000, in 2008 dollars.

Including the pipe material, manholes, labor, equipment, installation, and soft costs, the sewer collection system is projected to cost approximately $25,000,000 in 2008 dollars.

Table 3 is a summary of the total estimated project costs.

Table 3 Total Estimated Project Costs

Joshua Basin Water District
Wastewater Collection and Treatment System

System Component	Estimated Cost
Sewer Collection System	$ 25,000,000 (2008 Dollars)
Phase I Wastewater Treatment Plant	$ 28,000,000 (2008 Dollars)
Phase II Wastewater Treatment Plant Expansion	$ 13,000,000 (2013 Dollars)

The total estimated cost per connection for the initial system is $53 Million, which equates to approximately $7,300 per connection in 2008 Dollars. Once the backbone sewer infrastructure is in place and the Phase I Treatment Plant is constructed, the cost for subsequent connections is significantly reduced to somewhere between $3,000 and $5,000 per connection.

Annual operation and maintenance costs, including the additional administrative expenses resulting from implementing a centralized sewer system, are projected to be approximately $3.0 to $4.0 Million for a system with approximately 7,000 connections. This data is based on budget figures from other similarly-sized sewer districts. The primary components of this cost are field labor, management labor, power, sewer cleaning, and equipment repairs and rentals.

There would be additional costs for retrofitting existing houses and businesses to connect to the new sewer. The District would have to decide if this was a District-funded or a property owner cost.

SYSTEM ALTERNATIVES

One alternative to consider is that of oversizing the trunk sewer and building an oversized Phase I treatment facility owned by JBWD in the location shown in Figure 1, near the eastern border of JBWD. This regional facility would be designed to accept municipal sewage from both High Desert Water Agency and JBWD. High Desert could contract with JBWD to purchase treatment capacity and jointly fund the facilities. Because JBWD is lower in elevation than High Desert, sewer flows from High Desert could be conveyed in a gravity trunk main all the way to the treatment facility at the eastern edge of JBWD.

Another alternative worthy of consideration would be to reduce the capital cost of the initial system by building a smaller initial treatment plant in a location further to the west. Figure 1 shows an alternate treatment plant site located approximately along Twentynine Palms Highway, just west of Sunever Avenue. This treatment plant would have an initial capacity of 620,000 gallons per day (0.62 MGD). This capacity would serve 2,000 homes. The District has indicated that most of the near-term development in the next 5 to 7 years will occur in or near Section 33, at the west end of the District along Twentynine Palms Highway. The majority of the 2,000 homes initially connected to the system would be located in or adjacent to Section 33. Building a smaller treatment plant in this location would result in the following changes to quantities and costs:

- A reduction in the capital cost of the treatment plant from $28 Million to $7.5 Million.
- A 47% reduction in the amount of 24-inch trunk sewer required, from 53,000 linear feet to 28,000 linear feet.
- A 29% reduction in the amount of sewer main required, from 250,000 linear feet of 8-inch sewer main to 178,000 linear feet. The actual required length could be significantly less than 178,000 if only Section 33 was served by the new facility. 178,000 linear feet of sewer main is the amount of 8-inch pipe required to provide the District with the full capability of connecting all the sewered area west of Sunever Avenue to the treatment plant.
- A resulting decrease in capital cost of the sewer collection system, from $25,000,000 to $16,000,000.

- The total initial capital cost of this system is $23,500,000, which corresponds to a cost of $11,750 per EDU for 2,000 EDUs. It is notable that the initial capital cost could be as little as $17,000,000 ($8,500 per EDU), if the extents of the sewer collection system were strictly limited to serve only new homes in Section 33 or immediately adjacent to Section 33. However, the higher initial capital investment of $11,750 per EDU would give the District the flexibility to connect any new or existing customers located in the sewered area west of Sunever Avenue.

For this smaller treatment plant alternative, the smallest practical Phase II expansion increment would be 310,000 gpd (0.31 MGD), i.e. the plant could be expanded at some future date from 620,000 gpd (0.62 MGD) to 930,000 gpd (0.93 MGD), using an equally sized oxidation ditch. The initial plant containing two oxidation ditches would be expanded to a plant containing three equally-sized oxidation ditches.

Under this scenario, existing and future development within the sewered area and east of Sunever Avenue would need to be served by a sewer pump station in the vicinity of Copper Mountain College. This pump station would pump into a sewer forcemain flowing to the west along Twentynine Palms Highway and connecting to the headworks of the wastewater treatment plant. Alternatively, the area east of the treatment plant, including the college, could remain on septic.

Conservation Alternatives

There are other alternatives to consider that would reduce the amount of flow to the sewer. The first alternative is the treatment and use of grey water. In grey water systems, wastewater is essentially divided into two components. Grey water is wastewater from kitchens, laundry, bath, and spas. Black water is wastewater from toilets. Grey water constitutes about 80 % of the total volume of typical municipal wastewater. If treated on site, grey water can be used for landscape irrigation and in turn can be percolated into the ground. It also can be substituted for potable water with laundry, kitchen uses, and toilet flush. This option has the potential to reduce the size and cost of the treatment plant and also decrease the amount of potable water consumption.

On-site primary treatment of grey water is necessary before letting it percolate into the soil. The cost for an individual treatment apparatus for a residential unit ranges from $6,000 to $12,000, depending on the size of the unit.

Package Plants

Another option is to decentralize the treatment system. In this case, individual treatment systems for each house, or a single unit for a group of houses, can be installed to treat sewage on site. The District has requested an additional, follow-up feasibility study that will determine the impact and cost of a package plant that has been proposed for a 61-unit housing development in JBWD.

To provide sewer service to the near-term future development at the west end of the District, JBWD may wish to continue with a system of assuming operation of package plants installed by the developers, while beginning the process of funding, planning, and designing for the 0.62 MGD treatment facility near Sunever Avenue and the trunk sewer along Twentynine Palms Highway. When the collection system and wastewater treatment plant are available to go on line, the District can take the package plants offline and connect the collection systems serving these developments to the trunk main. The nominal amount of sewer main between these developments and the trunk main could be installed by the developers while the houses are being built. This installation of the connecting sewer by the developer could be a condition of service required by JBWD, before JBWD assumes ownership of the package plants.

POTENTIAL FUNDING SOURCES

A number of potential funding sources are available for the District to consider. Often the most sought-after funding sources for wastewater infrastructure projects are the following government agencies:

- State Water Resources Control Board
- State Revolving Fund
- US Bureau of Reclamation
- US Department of Agriculture (USDA)

Many wastewater agencies have had success in securing State Revolving Fund money administered by the State Water Resources Control Board (SWRCB). The SWRCB offers loans at extremely low rates of interest for infrastructure improvement projects. Many treatment and

collection systems have initiated or expanded their facilities using SRF loans. We have assisted various agencies through the entire SRF process, including project inception, loan application, permitting, development of a facilities planning document, preliminary design, and final design. The process generally includes development of a sewer rate study, which considers all project costs and recommends an appropriate sewer service fee that will allow the District to comfortably repay the debt service on the SRF loan, while maintaining an adequate balance in its General Fund for all other District operating expenses and budgetary obligations.

USDA also offers money administered through the Small Communities Rural Grant Program. Grants are obviously preferable to loans, but the availability of grant money is often dependent on income statistics for District residents and overall community population.

Many wastewater agencies in western Riverside County and other parts of Southern California have chosen to fund new capital wastewater infrastructure by selling bonds under the Mello Roos Program. This program was established in the early Eighties as an alternative method of funding public facilities such as schools, fire stations, parks, and water/wastewater utilities, after Proposition 13 curtailed public funds available for these facilities.

The Mello Roos funding process generally consists of a partnership between the agency and one developer or multiple developers. The developer floats all the up-front costs for the facilities. Meanwhile the agency forms a Community Facilities District (CFD) and lists the facilities that will be covered by the bond sale. Once the CFD is formed and the bond sale takes place, the developer is reimbursed for all the eligible costs from the proceeds of the bond sale. Each new residence within the CFD is assessed a monthly Mello Roos tax, which is used to pay the interest to the investors who hold the bonds. In general this process has worked well for many smaller agencies, because the capital cost of the improvements does not come from the District coffers, but rather from the developers who are later reimbursed. It is a particularly effective financing method in areas with strong development pressure, where housing developers are able to effectively sell new residences in spite of the additional Mello Roos tax that homeowners must pay.

Other options include loans from commercial banks and bond issues. Interest on the bonds and debt service are covered through establishment of appropriate sewer rates.

JBWD has the option of attempting to partner with High Desert Water Agency to jointly fund the facilities. It is possible that JBWD could offer treatment capacity and trunk main

capacity to High Desert at a cost that would be less than the cost that High Desert would incur in building its own treatment facility. The advantage to JBWD is an expansion of its revenue base and the opportunity to reduce the cost per home for providing a centralized sewer system. This is a viable alternative that will require further review, analysis, and diplomacy if it is to become a reality.

LAFCO PLAN FOR SEWER SERVICE

(Plan for Service (LAFCO (b) and Government Code Sections 56824.12 & 56653)

Adoption of Resolution: Resolution attached.

Resolution shall include all of the matters specified for a petition in **Section 56700** and be submitted with a plan for services prepared pursuant to **Section 56653**.

Section 56700 issues:

1) State that the proposal is made pursuant to this part.
2) State the nature of the proposal and list all proposed changes of organization.
3) Set forth a description of the boundaries of affected territory accompanied by a map showing the boundaries.
4) Set forth any proposed terms and conditions. *No specific terms and conditions are proposed.*
5) State the reason or reasons for the proposal.
6) State whether the petition is signed by registered voters or owners of land (there is no petition).
7) Designate up to three persons as chief petitioners, setting forth their names and mailing addresses. (No petition).
8) Request that proceedings be taken for the proposal pursuant to this part. (No petition).
9) State whether the proposal is consistent with the sphere of influence of any affected city or affected district. *The proposal is coterminus and consistent with the boundaries of the Joshua Basin Water District.*

b) A petition for a proposal for a change of organization or a reorganization shall….. *(Remainder of 56700 deals with petition).*

Plan of Service Prepared per Section 56653

(a) Whenever a local agency or school district submits a resolution of application for a change of organization or reorganization pursuant to this part, the local agency shall submit with the resolution of application a plan for providing services within the affected territory.
(b) The plan for providing services shall include all of the following information and any additional information required by the commission or the executive officer:

1) An enumeration and description of the services to be extended to the affected territory:
The Joshua Basin Water District (JBWD) seeks to provide a new service to plan for the operation of sewage facilities, to acquire, construct, and operate facilities for the collection, treatment and disposal of sewage and waste water. At the present time it is anticipated that the service will be provided through package treatment plants located throughout the District's boundaries.

2) The level and range of those services:
Services will initially involve acquiring, constructing, and operating facilities for the collection, treatment and disposal of sewage and waste

water. The District expects to begin with the use of "package" sewer treatment plants and standard sewer collection systems. This may ultimately be replaced or expanded by the use of a centralized sewer treatment system. It may also be expanded in the future to enforce state laws pertaining to maintenance and operation of septic systems in order to protect the groundwater.

3) An indication of when those services can feasibly be extended to the affected territory:
The Regional Board has already approved an application for a package treatment plant for a 61-unit housing project in the southwest portion of the District. The developer expects to begin construction as soon as the final tract map is approved. He states that the provision of a sewer treatment plant has been the only obstacle to filing the final tract map. Services to be provided by JBWD can begin as soon as the development project has been completed.

4) An indication of any improvement or upgrading of structures, roads, sewer or water facilities, or other conditions the local agency would impose or require within the affected territory if the change of organization or reorganization is completed:
For new developments needing package treatment systems, the JBWD would impose standards for the design of the collection systems to facilitate their connection to a future regional system. The District may also impose standards for the treatment plants themselves to establish more cost-effective life cycles, lower maintenance costs, and improved water quality. Eventually, the District could become involved in enforcing state or county standards for septic systems, cesspools, and outhouses to protect the groundwater or if the State imposes stricter standards for new and replacement septic systems.

(5) Information with respect to how those services will be financed.
Initial systems will be completely designed, installed, and paid for by new development directly or through an assessment district which the system will serve. Ongoing maintenance, operation, and depreciation costs will be paid by a user fee charged to the utility users. Existing customers are not expected to pay for any of these costs unless they are required at a later date to connect to a sewer service or install enhanced septic systems.

Continuation of Plan for Service per Section 56824.12(a)

1) ***Total cost will depend on the number of projects requiring sewer service, the size of each project, the potential for nearby users to connect to the package treatment plant, and proposed state laws that may require existing failed septic treatment systems to treat sewage more completely. Cost of the initial "packed aerobic reactor" package plant system for a proposed 61 unit tract is about $450,000.***

2) ***Annual maintenance cost for a system to serve 61 homes is expected to be about $43,000, including $35,000 for operations, maintenance, electricity,***

and disposal of solids, and $9,000 for maintenance of the collection system. This does not including administrative and billing expenses of the JBWD, or maintenance reserves. Monthly cost per customer is estimated to be in the range of $60 to $70 per equivalent dwelling unit. This will decrease inversely with the size of the project due to economies of scale that are achieved with larger projects.

3) ***There are no existing providers of this service in the Joshua Basin Water District boundaries nor in adjoining cities to our knowledge. However, The Hi-Desert Water District and Twentynine Palms Water District have as an authorized function sewers, with the service currently identified as "Planning". The Mojave Water Agency and County Service Area 70 are authorized sewer powers throughout their boundaries. In this case, it would be anticipated that an improvement district/zone would be created to accomplish the provision of sewer service.***

(4) ***The developer will construct all facilities necessary for providing the service. The on-going maintenance, operations, and replacement costs will be paid exclusively by users through a users utility fee. An estimate of those costs is attached.***

(5) ***The primary alternative for overseeing the design, construction, operation and maintenance of sewer treatment plants and a future centralized sewer treatment system, would be the County of San Bernardino through CSA 20 if it has that authority, or the establishment of a sewer district. It is the JBWD's understanding that the Regional Board is not enabled to provide this service.***

b) The clerk of the legislative body adopting a resolution of application shall file a certified copy of that resolution with the executive officer. Except as provided in subdivision (c), the commission shall process resolutions of application adopted pursuant to this article in accordance with Section 56824.14.

c) (1) Prior to submitting a resolution of application pursuant to this article to the commission, the legislative body of the special district shall conduct a public hearing on the resolution. Notice of the hearing shall be published pursuant to Sections 56153 and 56154. ***Public Hearing held on September 6, 2006.***

(2) Any affected local agency, affected county, or any interested person who wishes to appear at the hearing shall be given an opportunity to provide oral or written testimony on the resolution.

JOSHUA BASIN WATER DISTRICT

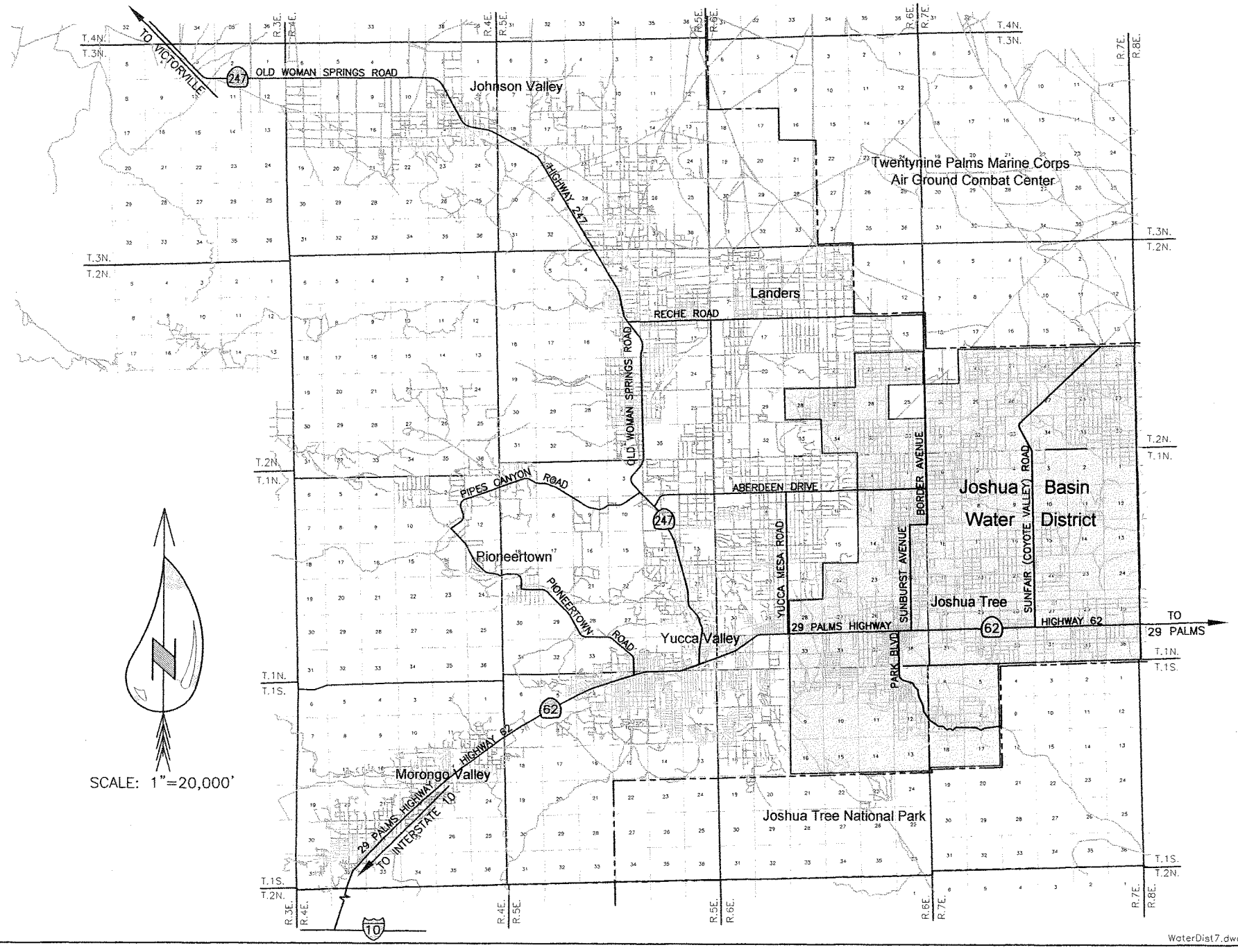

EXHIBIT 3